

Sea-Bird Electronics, Inc.

13431 NE 20th Street, Bellevue, WA 98005-2010 USA

Phone: (+1) 425-643-9866 Fax (+1) 425-643-9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 0122
CALIBRATION DATE: 27-Jun-13

SBE 45 CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

| | |
|--------------------|----------------------|
| g = -1.050803e+000 | CPcor = -9.5700e-008 |
| h = 1.316335e-001 | CTcor = 3.2500e-006 |
| i = -1.779251e-004 | WBOTC = -3.5355e-006 |
| j = 3.085009e-005 | |

| BATH TEMP (ITS-90) | BATH SAL (PSU) | BATH COND (Siemens/m) | INST FREQ (Hz) | INST COND (Siemens/m) | RESIDUAL (Siemens/m) |
|-----------------------|-------------------|--------------------------|-------------------|--------------------------|-------------------------|
| 22.0000 | 0.0000 | 0.00000 | 2828.25 | 0.00000 | 0.00000 |
| 1.0000 | 34.8543 | 2.97890 | 5533.78 | 2.97893 | 0.00003 |
| 4.5000 | 34.8342 | 3.28625 | 5740.19 | 3.28622 | -0.00002 |
| 15.0000 | 34.7906 | 4.26879 | 6354.56 | 4.26877 | -0.00002 |
| 18.5000 | 34.7812 | 4.61421 | 6556.61 | 4.61423 | 0.00001 |
| 24.0000 | 34.7708 | 5.17261 | 6870.36 | 5.17263 | 0.00003 |
| 28.9999 | 34.7650 | 5.69485 | 7150.97 | 5.69483 | -0.00002 |

$$f = \text{INST FREQ} * \text{sqrt}(1.0 + \text{WBOTC} * t) / 1000.0$$

$$\text{Conductivity} = (g + hf^2 + if^3 + jf^4) / (1 + \delta t + \epsilon p) \text{ Siemens/meter}$$

t = temperature[°C]; p = pressure[decibars]; δ = CTcor; ϵ = CPcor;

Residual = instrument conductivity - bath conductivity

